

NWS FORM E-19 (COVER)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

REPORT ON RIVER GAGE STATION

REVISED, PRINTED DATES: 04/08/2010, 08/22/2010

LOCATION: GLADE

STREAM: NORTH FORK SOLOMON

BASIN: SMOKY HILL 11

HSA: GID

REFERENCES:

E-19 - 4/29/53

NWS E-19 - JANUARY 19, 1994

USGS STATION DESCRIPTION - JANUARY 23, 2002

USGS STATION DESCRIPTION - JUNE 1, 2005

ABBREVIATIONS:

BM	- bench mark	EPA	- Environmental Protection Agency
DS	- downstream	IBWC	- International Boundary and Water Comm.
US	- upstream	MSRC	- Mississippi River Commission
HW	- high water	MORC	- Missouri River Commission
LW	- low water	NOAA	- National Oceanic and Atmospheric Admin.
RB	- right bank	NOS	- National Ocean Survey
LB	- left bank	NWS	- National Weather Service
MGL	- mean gulf level	TVA	- Tennessee Valley Authority
MLW	- mean low water	USACE	- U.S. Army Corps of Engineers
MSL	- mean sea level	USBR	- U.S. Bureau of Reclamation
MLT	- mean low tide	USGS	- U.S. Geological Survey
MT	- mean tide	USWB	- U.S. Weather Bureau
WQ	- water quality	NGVD	- National Geodetic Vertical Datum
RM	- reference mark	NAD	- North American Datum
RP	- reference point		

LOCATION IDENTIFICATION: GDEK1

NWS INDEX NUMBER: 14307702

USGS NUMBER: 06871000

MAP OF GAGE LOCATION

LATITUDE: 39 40 23 SOURCE: USGS
LONGITUDE: 99 18 33

LOCATION: NORTH FORK SOLOMON near GLADE, KS
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NWS FORM E-19 PAGE 1: GAGE MAP

BENCHMARKS

ELEVATION OF GAGE ZERO: 1754.040 VERTICAL DATUM: NGVD 1929
LEVELING AGENCY AND DATE: 8/4/2008 CHECKBAR: 27.810
RATING AGENCY:

BENCHMARK	DESCRIPTION	GAGE ZERO	DATUM
MP1	CHISELED ARROW ON DOWNSTREAM HANDRAIL AT STATION.	28.818	1782.858
MP3	PHILLIPS SHELL BOLT IN THE RIGHT DOWNSTREAM PIER NEAREST THE CHANNEL. BOLT IS LOCATED JUST SOUTH OF THE UPPER CSI PIPE.	11.153	1765.193
MP4	AN EARTH AUGER BIPOD LOCATED JUST DOWNSTREAM OF THE ORIFICE ON THE RIGHT BANK. ESTABLISHED 5/27/2005.	4.275	1758.315
RM10	LAG SCREW IN POWER POLE 3 TO 4 FT ABOVE GROUND 50 FT NORTH 45 EAST OF NORTHEAST CORNER OF BRIDGE.	29.789	1783.829
RM5	STANDARD USGS BRONZE TABLET ON LEFT DOWNSTREAM END OF BRIDGE IN CONCRETE BRIDGE RAIL.	28.785	1782.825
RM6	STANDARD USGS BRONZE TABLET ON RIGHT DOWNSTREAM END OF BRIDGE IN CONCRETE BRIDGE RAIL.	28.761	1782.801

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GAGES

DCP

TELEM

NESS ID: D10DA164
OWNER: USGS
REPORT TIME: 00:4130
INTERVAL: 60
CRITERIA: previous goes id was
PAYOR/COST OF LINE: / \$

TYPE OF TELEMETRY:
OWNER:
PHONE NUMBER:
INTERVAL:
17245742

GAGE TYPE	OWNER	MAINTENANCE	BEGAN	ENDED	GAGE LOCATION/REMARKS
wireweight	USGS	USGS	05/19/1952	10/16/1985	USGS WIRE WEIGHT INSTALLED ON UPSTREAM SIDE OF BRIDGE. RELOCATED 11/21/52, ON DOWNSTREAM SIDE OF BRIDGE. REMOVED FOR BRIDGE CONSTRUCTION IN 1985.
Unk	USGS	USGS	11/11/1952	06/28/1999	DIGITAL RECORDER WAS REMOVED 5/25/1994 AND THE GRAPHIC RECORDER WAS REMOVED 6/28/1999.
bubble	USGS	USGS	06/17/1960	06/28/1999	RECORDERS AND MANOMETER IN A STEEL-COVERED SHELTER MOUNTED ON DOWNSTREAM END OF PIER.
wireweight	USGS	USGS	08/01/1986		BRIDGE CONSTRUCTION WAS COMPLETED IN LATE SUMMER OF 1986.
bubble	USGS	USGS	05/25/1994		SUTRON 8210 DCP WITH SHAFT ENCODER INSTALLED AND THE DIGITAL RECORDER WAS REMOVED.
tipping	USGS	USGS	05/02/2001	12/31/2050	TIPPING BUCKET RAIN GAUGE INSTALLED.
crest	USGS	USGS	04/27/2005	12/31/2050	TWO CSI PIPES INSTALLED FOR VERIFICATION OF PEAKS.

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HISTORY

PUBLICATION/LOCATION OF RECORDS	STARTING DATE	ENDING DATE
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TYPE OF GAGE	OWNER	STARTING DATE	ENDING DATE
-----	-----	-----	-----
wireweight	USGS	05/19/1952	10/16/1985
Unk	USGS	11/11/1952	06/28/1999
bubble	USGS	06/17/1960	06/28/1999
wireweight	USGS	08/01/1986	
bubble	USGS	05/25/1994	
tipping	USGS	05/02/2001	12/31/2050
crest	USGS	04/27/2005	12/31/2050

ZERO ELEVATION	STARTING DATE
-----	-----
1756.170	05/19/1952
1756.040	06/06/1953
1754.040	10/16/1985

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CRESTS

FLOOD STAGE: 11.00 ACTION STAGE: 10.00 BANKFULL STAGE: 10.00
 FLOOD FLOW: 2790 ACTION FLOW: 1930

DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
07/20/1953	10:00	16.35	11600				
05/28/1954	UNDEF	11.80	4240				
09/26/1955	UNDEF	11.63	4100				
07/07/1956	UNDEF	6.35	780				
05/29/1957	UNDEF	13.34	5450				
06/16/1957	UNDEF	18.55	23300				
07/04/1958	UNDEF	6.58	992				
07/14/1959	UNDEF	12.21	3330				
03/23/1960	UNDEF	11.52	4530				
05/16/1960	UNDEF	13.08	4330				
06/06/1961	UNDEF	10.47	4580				
07/02/1962	UNDEF	10.72	4260				
08/12/1963	UNDEF	9.48	3570				
07/12/1964	UNDEF	4.53	846				
06/12/1965	06:00	11.73	3230				
09/06/1965	17:00	12.31	3960				
10/19/1965	UNDEF	12.40	4000				
07/28/1967	UNDEF	12.20	3900				
05/06/1968	UNDEF	13.20	5760				
06/14/1968	UNDEF	12.26	4590				
08/15/1968	05:00	17.01	14200				
05/21/1969	UNDEF	10.20	2640				
05/25/1970	UNDEF	5.59	437				
09/01/1971	UNDEF	6.87	878				
09/07/1972	UNDEF	8.30	1400				
09/29/1973	UNDEF	4.31	136				
05/25/1974	UNDEF	5.10	280				
08/14/1975	UNDEF	11.58	4100				
07/02/1976	UNDEF	6.48	623				
09/03/1977	UNDEF	9.92	2500				
08/15/1978	UNDEF	8.56	1590				
08/26/1979	UNDEF	10.59	3090				
04/05/1980	UNDEF	3.84	56				
07/27/1981	UNDEF	7.73	1100				
07/02/1982	UNDEF	8.35	1460				
05/20/1983	UNDEF	5.70	370				
06/15/1984	UNDEF	5.77	481				
08/14/1985	UNDEF	13.68	2880				
07/14/1986	07:00	8.24	1370				
04/14/1987	12:00	5.37	323				
02/13/1988	04:00	4.47					ICE JAM
07/21/1988	UNDEF	4.04	59				
06/26/1989	UNDEF	8.21	1600				
05/15/1990	UNDEF	7.71	1260				
05/25/1991	UNDEF	4.50	83				

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DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
06/05/1992	UNDEF	11.60	2340				
08/15/1993	UNDEF	11.88	2520				
05/07/1994	UNDEF	7.10	491				
05/27/1995	UNDEF	14.83	8340				
08/02/1996	UNDEF	10.49	2380				
06/26/1997	22:45	9.66	1730				
03/27/1998	18:45	5.14	251				
08/03/1999	14:45	7.16	752				
07/23/2000	UNDEF	4.33	121				
05/06/2001	UNDEF	5.41	276				
03/26/2002	UNDEF	3.66	28				
03/18/2003	UNDEF	3.40	21				
04/07/2005	UNDEF	6.07	384				
08/19/2006	UNDEF	4.84	153				
02/20/2007	UNDEF	7.32	406				
05/23/2008	08:00	13.20	5472				
08/24/2008	14:15	11.74					

X Backwater from ice. The flow is estimated.

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LOW WATER RECORDS

DATE OF LOW WATER	STAGE (ft)	FLOW (CFS)	REMARKS
06/01/1952	2.00	0	ZERO FLOW AT ABOUT 2.0 FT, BUT VARIABLE.
08/09/2000	2.70	0	
10/01/2005		0	
10/01/2006		0	

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CONDITIONS AFFECTING FLOW

MILES ABOVE MOUTH: 82.9 DRAINAGE AREA: 849.0 POOL STAGE: 0.0

STREAM BED: COMPOSED MAINLY OF SHIFTING SAND AND GRAVEL.

REACH: BIG TIMBER CREEK (MILE 117.0) DOWNSTREAM TO BOW CREEK (MILE 68.4).

REGULATION:

DIVERSION: SOME IRRIGATION DEVELOPMENT ABOVE STATION.

WINTER: MODERATE TO SEVERE ICE CONDITIONS CAN BE EXPECTED WITH THE STREAM OCCASIONALLY GOING DRY UNDER SOLID ICE.

TOPOGRAPHY: CHANNEL IS FAIRLY STRAIGHT FOR ABOUT 600 FT. ABOVE AND 1000 FT. BELOW THE GAGE, BUT MAKES AN ANGLE OF ABOUT 45

REMARKS: ROLLING PLAINS WITH LOWER ELEVATION RANGELAND TO THE SOUTH OF CHANNEL AND HIGHER ELEVATION TO THE NORTH OF THE CHANNEL.

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STAGE	AREAS AFFECTED
11.00	FLOOD STAGE AND BANKFULL STAGE (OVERFLOW OF SOUTH BANK BEGINS).
16.00	MODERATE FLOODING BEGINS (WIDESPREAD FLOODING BEGINS IN THE VICINITY OF THE SITE).
18.55	HIGHEST STAGE EVER RECORDED ON JUNE 16, 1957.
18.70	50 YEAR FLOOD FREQUENCY.
26.60	US HIGHWAY 183 BEGINS FLOODING AT BRIDGE AND RIVER GAGE.
27.00	MAJOR FLOODING BEGINS.

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RIVER STAGE DATA

	40-	

	35-	

	30-	

27.00 - MAJOR FLOODING BEGINS.	-----	
26.60 - US HIGHWAY 183 BEGINS FLOODING AT BRIDGE AND RIVER GAGE.	-----	
	25-	

	20-	

18.70 - 50 YEAR FLOOD FREQUENCY.	-----	18.55 06/16/1957
18.55 - HIGHEST STAGE EVER RECORDED ON JUNE 16, 1957.	-----	17.01 08/15/1968
16.00 - MODERATE FLOODING BEGINS (WIDESPREAD FLOODING BEGINS IN THE VICINITY OF THE SITE).	-----	16.35 07/20/1953
	15-	
	-----	14.83 05/27/1995
	-----	13.68 08/14/1985
	-----	12.40 10/19/1965
	-----	11.88 08/15/1993
11.00 - FLOOD STAGE AND BANKFULL STAGE (OVERFLOW OF SOUTH BANK BEGINS).	-----	10.72 07/02/1962
	10-	9.92 09/03/1977
	-----	8.56 08/15/1978
	-----	7.73 07/27/1981
	-----	6.87 09/01/1971
	5-	5.77 06/15/1984
	-----	4.84 08/19/2006
	-----	3.84 04/05/1980

	0-	

	-5-	

	-10-	

REACH: BIG TIMBER CREEK (MILE 117.0) DOWNSTREAM TO BOW CREEK (MILE 68.4).

ELEVATION ZERO: 1754.04

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CONTACTS

SQ	CONTACT/REMARKS	PHONE
1	KS USGS MAINTENANCE.	785-628-8918

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